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2 A METHOD AND APPARATUS FOR TESTING ROUTABILITY

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11 ABSTRACT

12 A method and apparatus for determining routing
13 feasibility of a plurality of nets. Each net has an
14 associated set of one or more routing solutions, wherein
15 each solution specifies one or more routing resources
16 consumed by the net. A liveness Boolean function is
17 generated having variables that represent respective
18 net/solution pairs. If there exists a set of values for the
19 variables such that at least one of the variables for each
20 net is logically true, then the liveness function is true.
21 An exclusivity function is generated using the variables
22 that represent the net/solution pairs. If there exists at
23 least one set of values for the variables such that no
24 resource is used is by more than a predetermined number of
25 nets, then the exclusivity function is true. The nets are
26 routable using the provided solutions if there is one set of
27 values for the variables such that both the liveness and
28 exclusivity functions are true.